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10/580,622	05/24/2006	Christopher Patrick	040132	4386

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EXAMINER	
HERRERA, DIEGO D	
ART UNIT	PAPER NUMBER
2617	

NOTIFICATION DATE	DELIVERY MODE
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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Office Action Summary	Application No. 10/580,622	Applicant(s) PATRICK, CHRISTOPHER	
	Examiner DIEGO HERRERA	Art Unit 2617	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *17 September 2009*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-65* is/are pending in the application.

4a) Of the above claim(s) *21,61 and 63* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-20, 22-60, 62 and 64-65* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 9/17/2009 has been entered.

Response to Amendment

Claims 21, 60, and 63 have been cancelled.

Claim 64 has been amended.

Claim 65 is a new claims and has been added.

Response to Arguments

Applicant's arguments with respect to claims 1-65 have been considered but are moot in view of the new ground(s) of rejection.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

The factual inquiries set forth in *Graham* **v.** *John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

Claims 1-6, 9-10, 14, 16-17, 19-20, 22-27, 31-32, 35-36, 39, 41-43, 45, 48-49, 52, 54-60, 62, and 64-65 are rejected under 35 U.S.C. 103(a) as being unpatentable over Stein et al. (US 20030008669 A1), and in view of Takeuchi et al. (US 20030050077 A1).

Regarding claim 1. Stein discloses a method for calculating an estimate of the position of a mobile station (abstract, title, fig. 1a, ¶: 20, Stein teaches method for calculating position of a mobile station), comprising:

collecting in a mobile station, position estimate information (PEI) transmitted by a location node (fig. 1a-7, abstract, title, ¶: 135, Stein teaches receives signals from GPS satellites, base stations, and/or repeaters); location node in one or more messages carried on at least one of a common channel or a dedicated channel, and wherein the PEI in the one or more messages includes a location node identification and longitude and latitude information of the location node (fig. 1a, 7; ¶: 3, 135,138, 146; Stein teaches GPS information about position information given/received to mobile device, hence, including latitude and longitude as GPS information include among other things latitudes and longitudes and is analogous and notoriously well known in the art);

generating in the mobile station, PEI parameters based upon the PEI, wherein the PEI parameters include information from which the location node can be uniquely located or identified (abstract, title, ¶: 138, Stein teaches the measurements and identifier PN's are provided to a TX data processor 742 for transmission back to the PDE, which uses the information to determine the position of terminal 106x); and

sending the PEI parameters from the mobile station to a position determination entity, wherein the PEI parameters permit calculation of the position estimate (¶: 138, Stein also discloses the controller 730 receives the measurements for the base stations and/or GPS satellites, the PN sequences for the base stations, the identifier PN's of the repeaters, the estimated signal quality of the received signals, or any combination thereof).

However, the reference of Stein et al. does not discloses more clearly and specifically the nodes been that of a base stations, instead it solves the problem using repeaters, however, the references can be modified to that of using base stations as in the references it makes mention of the PN sequences that the repeaters are identified by is an idea used already for base stations, nevertheless, the examiner maintains that this was well known in the art and could be argued that it could be remedy by someone of ordinary skill in the art at the time the invention of Stein et al. was present by Takeuchi et al., Takeuchi et al. teaches in paragraphs 15-16, 21-28; wherein the mobile terminal sends information about the serving base station and peripheral base stations to the PDE or position server to locate the mobile device.

Therefore, it would have been obvious to a person of ordinary skill in the art to specifically include the base station information sent by the mobile terminal to the position server to determine the mobile terminals location, as taught by Takeuchi et al. for the purposes of precisely determining the terminal position by calculating the distance from the base station and the GPS satellite position coordinates.

Regarding claim 27. Stein discloses a method for calculating a position estimate of a mobile station which has generated position estimate information (PEI) parameters based upon PEI transmitted by a location node (fig. 1a-7, abstract, title, ¶: 135, Stein teaches receives signals from GPS satellites, base stations, and/or repeaters), the method comprising:

receiving in a position determination entity, the PEI parameters which have been sent by the mobile station (abstract, title, ¶: 143, Stein teaches the PDE 130 receives the reverse modulated signal from the terminal and it is processed by transceiver 814 to provide samples), the PEI parameters including information from which the location node can be located or identified (abstract, title, ¶: 143, Stein teaches also to a RX data processor 822 to recover the data transmitted by the terminal which may include any combination of measurements, identifier PN's reported by the terminal); and wherein the PEI parameters contain some or all of the PEI received from the location node and additional information which can be identified by the mobile station (fig. 1a, 7; ¶: 3, 135,138, 146; Stein teaches GPS information about position information given/received to mobile device, hence, including latitude and longitude as GPS information include among other things latitudes and longitudes and is analogous and notoriously well

known in the art); and calculating the position estimate of the mobile station based upon the PEI parameters (abstract, title, ¶: 143, 144, Stein further discloses the data processor 822 provides the received data to controller 810 which estimates the position for the terminal based on the data from the terminal and additional data from storage unit 830).

However, the reference of Stein et al. does not discloses more clearly and specifically the nodes been that of a base stations, instead it solves the problem using repeaters, however, the references can be modified to that of using base stations as in the references it makes mention of the PN sequences that the repeaters are identified by is an idea used already for base stations, nevertheless, the examiner maintains that this was well known in the art and could be argued that it could be remedy by someone of ordinary skill in the art at the time the invention of Stein et al. was present by Takeuchi et al., Takeuchi et al. teaches in paragraphs 15-16, 21-28; wherein the mobile terminal sends information about the serving base station and peripheral base stations to the PDE or position server to locate the mobile device.

Therefore, it would have been obvious to a person of ordinary skill in the art to specifically include the base station information sent by the mobile terminal to the position server to determine the mobile terminals location, as taught by Takeuchi et al. for the purposes of precisely determining the terminal position by calculating the distance from the base station and the GPS satellite position coordinates.

Regarding claim 42. A system for calculating a position estimate of a mobile station, the system (¶: 20, Stein teaches method and apparatus to determine the position of a

terminal communicating through a repeater in a wireless communication system) comprising:

a location node configured for transmitting position estimate information (PEI) to the mobile station (abstract, title, ¶: 138, Stein teaches the measurements and identifier PN's are provided to a TX data processor 742 for transmission back to the PDE, which uses the information to determine the position of terminal 106x); station in one or more messaged carried on one of a common channel or a dedicated channel, and wherein the PEI in the one or more messages includes a location node identification and longitude and latitude information of the location node (fig. 1a, 7; ¶: 3, 135,138, 146; Stein teaches GPS information about position information given/received to mobile device, hence, including latitude and longitude as GPS information include among other things latitudes and longitudes and is analogous and notoriously well known in the art);

a position determination entity for receiving PEI parameters sent by the mobile station (abstract, title, ¶: 143, Stein teaches the PDE 130 receives the reverse modulated signal from the terminal and it is processed by transceiver 814 to provide samples), the mobile station having generated the PEI parameters based upon the PEI, and wherein the PEI parameters include information from which the location node can be located or identified (abstract, title, ¶:138, Stein teaches the controller 730 receives the measurements for the base stations and/or GPS satellites, the PN sequences for the base stations, the identifier PN's of the repeaters, the estimated signal quality of the received signals, or any combination thereof); and

a processor associated with the position determination entity, the processor calculating

the position estimate of the mobile station based upon the PEI parameters (abstract, title, ¶: 138, 143, 144, Stein teaches the measurements and identifier PN's are provided to a TX data processor 742 for transmission back to the PDE, which uses the information to determine the position of terminal 106x. Stein also discloses the PDE 130 receives the reverse modulated signal from the terminal and it is processed by transceiver 814 to provide samples to a RX data processor 822 to recover the data transmitted by the terminal which may include any combination of measurements, identifier PN's reported by the terminal. Stein teaches the data processor 822 provides the received data to controller 810 which estimates the position for the terminal based on the data from the terminal and additional data from storage unit 830).

However, the reference of Stein et al. does not discloses more clearly and specifically the nodes been that of a base stations, instead it solves the problem using repeaters, however, the references can be modified to that of using base stations as in the references it makes mention of the PN sequences that the repeaters are identified by is an idea used already for base stations, nevertheless, the examiner maintains that this was well known in the art and could be argued that it could be remedy by someone of ordinary skill in the art at the time the invention of Stein et al. was present by Takeuchi et al., Takeuchi et al. teaches in paragraphs 15-16, 21-28; wherein the mobile terminal sends information about the serving base station and peripheral base stations to the PDE or position server to locate the mobile device.

Therefore, it would have been obvious to a person of ordinary skill in the art to specifically include the base station information sent by the mobile terminal to the

position server to determine the mobile terminals location, as taught by Takeuchi et al. for the purposes of precisely determining the terminal position by calculating the distance from the base station and the GPS satellite position coordinates.

Regarding claim 62. Stein discloses a computer readable medium containing instructions for controlling a computer which calculates a position estimate of a mobile station (¶: 20, Stein teaches method and apparatus to determine the position of a terminal communicating through a repeater in a wireless communication system) according to a method comprising:

collecting in the mobile station position estimate information (PEI) transmitted by a location node (abstract, title, ¶: 138, Stein teaches the measurements and identifier PN's are provided to a TX data processor 742 for transmission back to the PDE, which uses the information to determine the position of terminal 106x); station in one or more messaged carried on one of a common channel or a dedicated channel, and wherein the PEI in the one or more messages includes a location node identification and longitude and latitude information of the location node (fig. 1a, 7; ¶: 3, 135,138, 146; Stein teaches GPS information about position information given/received to mobile device, hence, including latitude and longitude as GPS information include among other things latitudes and longitudes and is analogous and notoriously well known in the art);

generating in the mobile station PEI parameters based upon the PEI, wherein the PEI parameters include information from which the location node can be located or identified (abstract, title, ¶: 138, Stein teaches the measurements and identifier PN's are provided to a TX data processor 742 for transmission back to the PDE, which uses the

information to determine the position of terminal 106x); and

sending the PEI parameters from the mobile station to a position determination entity (abstract, title, ¶: 143, Stein teaches also to a RX data processor 822 to recover the data transmitted by the terminal which may include any combination of measurements, identifier PN's reported by the terminal), wherein the PEI parameters permit calculation of the position estimate of the mobile station (abstract, title, ¶: 143, 144, Stein further discloses the data processor 822 provides the received data to controller 810 which estimates the position for the terminal based on the data from the terminal and additional data from storage unit 830).

However, the reference of Stein et al. does not discloses more clearly and specifically the nodes been that of a base stations, instead it solves the problem using repeaters, however, the references can be modified to that of using base stations as in the references it makes mention of the PN sequences that the repeaters are identified by is an idea used already for base stations, nevertheless, the examiner maintains that this was well known in the art and could be argued that it could be remedy by someone of ordinary skill in the art at the time the invention of Stein et al. was present by Takeuchi et al., Takeuchi et al. teaches in paragraphs 15-16, 21-28; wherein the mobile terminal sends information about the serving base station and peripheral base stations to the PDE or position server to locate the mobile device.

Therefore, it would have been obvious to a person of ordinary skill in the art to specifically include the base station information sent by the mobile terminal to the position server to determine the mobile terminals location, as taught by Takeuchi et al.

for the purposes of precisely determining the terminal position by calculating the distance from the base station and the GPS satellite position coordinates.

Regarding claim 64. Stein discloses a system for calculating a position estimate of a mobile station (¶: 20, Stein teaches method and apparatus to determine the position of a terminal communicating through a repeater in a wireless communication system), the system comprising:

transmitting means for transmitting position estimate information (PEI) to the mobile station (abstract, title, ¶: 138, Stein teaches the measurements and identifier PN's are provided to a TX data processor 742 for transmission back to the PDE, which uses the information to determine the position of terminal 106x); station in one or more messages carried on one of a common channel or a dedicated channel, and wherein the PEI in the one or more messages includes a location node identification and longitude and latitude information of the location node (fig. 1a, 7; ¶: 3, 135,138, 146; Stein teaches GPS information about position information given/received to mobile device, hence, including latitude and longitude as GPS information include among other things latitudes and longitudes and is analogous and notoriously well known in the art);

locating means for receiving PEI parameters sent by the mobile station (abstract, title, ¶: 143, Stein teaches also to a RX data processor 822 to recover the data transmitted by the terminal which may include any combination of measurements, identifier PN's reported by the terminal), the mobile station having generated the PEI parameters based upon the PEI (¶: 20, Stein teaches method and apparatus to determine the position of a terminal communicating through a repeater in a wireless communication

system), and wherein the PEI parameters include information from which the location node can be located or identified (abstract, title, ¶: 143, Stein teaches also to a RX data processor 822 to recover the data transmitted by the terminal which may include any combination of measurements, identifier PN's reported by the terminal); and wherein the PEI parameters contain some or all of the PEI received from the location node and additional information which can be identified by the mobile station (fig. 1a, 7; ¶: 3, 135,138, 146; Stein teaches GPS information about position information given/received to mobile device, hence, including latitude and longitude as GPS information include among other things latitudes and longitudes and is analogous and notoriously well known in the art); and processing means associated with the locating means (abstract, title, ¶: 143, Stein teaches also to a RX data processor 822 to recover the data transmitted by the terminal which may include any combination of measurements, identifier PN's reported by the terminal), the processing means calculating the position estimate of the mobile station based upon the PEI parameters (abstract, title, ¶: 143, 144, Stein further discloses the data processor 822 provides the received data to controller 810 which estimates the position for the terminal based on the data from the terminal and additional data from storage unit 830).

However, the reference of Stein et al. does not discloses more clearly and specifically the nodes been that of a base stations, instead it solves the problem using repeaters, however, the references can be modified to that of using base stations as in the references it makes mention of the PN sequences that the repeaters are identified by is an idea used already for base stations, nevertheless, the examiner maintains that this

was well known in the art and could be argued that it could be remedy by someone of ordinary skill in the art at the time the invention of Stein et al. was present by Takeuchi et al., Takeuchi et al. teaches in paragraphs 15-16, 21-28; wherein the mobile terminal sends information about the serving base station and peripheral base stations to the PDE or position server to locate the mobile device.

Therefore, it would have been obvious to a person of ordinary skill in the art to specifically include the base station information sent by the mobile terminal to the position server to determine the mobile terminals location, as taught by Takeuchi et al. for the purposes of precisely determining the terminal position by calculating the distance from the base station and the GPS satellite position coordinates.

Regarding claim 65. A mobile station for use in a communications network (fig. 1a, element 106, mobile terminal or station of Stein et al.), the mobile station comprising:

an antenna configured to receive position estimate information (PEI) from a location node of the communications network on at least one of a common channel or a dedicated channel (fig. 3, element 302a, Stein et al. shows an antenna used to send and receive information); and

a processor communicatively coupled with the antenna and configured to process the PEI received from the location node via the antenna (fig. 7 elements 726, 742, 712, 714, Stein et al. shows processors for receiving and transmitting coupled to antenna of mobile terminal, ¶: 135) to:

determine a location node identification and longitude and latitude information of the location node contained in the PEI;

generate PEI parameters based upon the PEI such that the location node can be uniquely located or identified from the PEI parameters, and the position estimate can be calculated from the PEI parameters; and

send the PEI parameters from the mobile station via the antenna toward a position determining entity.

However, the reference of Stein et al. does not discloses more clearly and specifically the nodes been that of a base stations and their PEI information, such as latitude and longitude and generating that information message to PDE to be sent, instead it solves the problem using repeaters, however, the references can be modified to that of using base stations as in the references it makes mention of the PN sequences that the repeaters are identified by is an idea used already for base stations, nevertheless, the examiner maintains that this was well known in the art and could be argued that it could be remedy by someone of ordinary skill in the art at the time the invention of Stein et al. was present by Takeuchi et al., Takeuchi et al. teaches in paragraphs 15-16, 21-28; wherein the mobile terminal sends information about the serving base station and peripheral base stations to the PDE or position server to locate the mobile device. Therefore, it would have been obvious to a person of ordinary skill in the art to specifically include the base station information sent by the mobile terminal to the position server to determine the mobile terminals location, as taught by Takeuchi et al. for the purposes of precisely determining the terminal position by calculating the distance from the base station including that of latitude and longitude and base ID and the GPS satellite position coordinates.

Consider claim 2. The method according to claim 1, further comprising:

receiving in the mobile station, a location request message from the position determination entity; and

initiating the generating of the position estimate information (PEI) parameters responsive to the location request message (abstract, title, ¶: 140, Stein teaches the PDE can automatically send to the terminal a list of PN's to search including the identifier PNS, which may be used for position related calls).

Consider claim 28. The method according to claim 27, further comprising:

sending a location request message to the mobile station, causing the mobile station to send the position estimate information (PEI) parameters (abstract, title, ¶: 140, Stein teaches the PDE can automatically send to the terminal a list of PN's to search including the identifier PNS, which may be used for position related calls).

Consider claim 43. The system according to claim 42, wherein the position determination entity sends a location request message to the mobile station, causing the mobile station to generate the position estimate information (PEI) parameters (abstract, title, ¶: 140, Stein teaches the PDE can automatically send to the terminal a list of PN's to search including the identifier PNS, which may be used for position related calls).

Consider claim 3. The method according to claim 1, further comprising:

initiating the generating of the position estimate information (PEI) parameters responsive to a location request generated by the mobile station (abstract, title, ¶: 140 the PDE can send the identifier PN's to a terminal upon request when it is known that

repeaters are present and there are not enough GPS measurements to perform position determination).

Consider claims 4, 30, 44, Stein discloses everything as applied in claims 1, 27, and 42 above; the PEI parameters include latitude and longitude of the location node. The Examiner maintains this feature was well known in the art at the time of invention and taught by Stein (fig. 1a, 7; ¶: 3, 135,138, 146; Stein teaches GPS information about position information given/received to mobile device, hence, including latitude and longitude as GPS information include among other things latitudes and longitudes and is analogous and notoriously well known in the art).

Consider claim 5. The method according to claim 1, wherein the position estimate information (PEI) parameters include the time which the mobile station receives the PEI (abstract, title, ¶: 136, Stein teaches the RF receiver unit 722 may be operated to provide a controller 730 the arrival times for the strongest received multi-paths or the multi-paths having signal strengths that exceed a particular threshold).

Consider claim 6. The method according to claim 1, wherein the position estimate information (PEI) parameters indicate whether or not the mobile station is currently in view of the location node (abstract, title, ¶; 7, 135, 138, Stein teaches one or more repeaters 114 may be employed by system 100 to provide coverage for regions that would not otherwise be covered by a base station. Stein teaches a terminal 106x receives signals from GPS satellites, base stations, and/or repeaters. Stein also teaches the controller 730 receives the measurements for the base stations and/or GPS

satellites, the PN sequences for the base stations, the identifier PN's of the repeaters, the estimated signal quality of the received signals, or any combination thereof).

Consider claim 31. The method according to claim 27, wherein the position estimate information (PEI) parameters indicate whether or not the mobile station is currently in view of the location node (abstract, title, ¶; 7, 135, 138, Stein teaches one or more repeaters 114 may be employed by system 100 to provide coverage for regions that would not otherwise be covered by a base station. Stein teaches a terminal 106x receives signals from GPS satellites, base stations, and/or repeaters. Stein also teaches the controller 730 receives the measurements for the base stations and/or GPS satellites, the PN sequences for the base stations, the identifier PN's of the repeaters, the estimated signal quality of the received signals, or any combination thereof).

Consider claim 45. The system according to claim 42, wherein the position estimate information (PEI) parameters indicate whether or not the mobile station is currently in view of the location node(abstract, title, ¶; 7, 135, 138, Stein teaches one or more repeaters 114 may be employed by system 100 to provide coverage for regions that would not otherwise be covered by a base station. Stein teaches a terminal 106x receives signals from GPS satellites, base stations, and/or repeaters. Stein also teaches the controller 730 receives the measurements for the base stations and/or GPS satellites, the PN sequences for the base stations, the identifier PN's of the repeaters, the estimated signal quality of the received signals, or any combination thereof).

Consider claim 9. The method according to claim 1, wherein if the mobile station is currently in view of the location node, the position estimate information (PEI)

parameters include information relating to proximity of the mobile station relative to the location node (abstract, title, ¶: 136, Stein teaches the RF receiver unit 722 may be operated to provide a controller 730 the arrival times for the strongest received multi-paths or the multi-paths having signal strengths that exceed a particular threshold).

Consider claim 35. The method according to claim 27, wherein if the mobile station is currently in view of the location node, the position estimate information (PEI) parameters include information relating to proximity of the mobile station relative to the location node (abstract, title, ¶: 136, Stein teaches the RF receiver unit 722 may be operated to provide a controller 730 the arrival times for the strongest received multi-paths or the multi-paths having signal strengths that exceed a particular threshold).

Consider claim 48. The system according to claim 42, wherein if the mobile station is currently in view of the location node, the position estimate information (PEI) parameters include information relating to proximity of the mobile station relative to the location node (abstract, title, ¶: 136, Stein teaches the RF receiver unit 722 may be operated to provide a controller 730 the arrival times for the strongest received multi-paths or the multi-paths having signal strengths that exceed a particular threshold).

Consider claim 10. The method according to claim 9, wherein the information relating to the proximity of the mobile station relative to the location node comprises signal strength of the location node (abstract, title, ¶: 136, Stein teaches the RF receiver unit 722 may be operated to provide a controller 730 the arrival times for the strongest received multi-paths or the multi-paths having signal strengths that exceed a particular threshold).

Consider claim 36. The method according to claim 35, wherein the information relating to the proximity of the mobile station relative to the location node comprises signal strength of the location node (abstract, title, ¶: 136, Stein teaches the RF receiver unit 722 may be operated to provide a controller 730 the arrival times for the strongest received multi-paths or the multi-paths having signal strengths that exceed a particular threshold).

Consider claim 49. The system according to claim 48, wherein the information relating to the proximity of the mobile station relative to the location node comprises signal strength of the location node (abstract, title, ¶: 136, Stein teaches the RF receiver unit 722 may be operated to provide a controller 730 the arrival times for the strongest received multi-paths or the multi-paths having signal strengths that exceed a particular threshold).

Consider claim 12. The method according to claim 9, wherein the information relating to the proximity of the mobile station relative to the location node comprises a round-trip- delay (RTD) measurement (abstract, title, ¶: 18,146, Stein teaches using round trip delay (RID) measurements to locate a terminal when the terminal is in view of a repeater).

Consider claim 38. The method according to claim 35, wherein the information relating to the proximity of the mobile station relative to the location node comprises a round-trip- delay (RTD) measurement (abstract, title, ¶: 18,146, Stein teaches using round trip delay (RID) measurements to locate a terminal when the terminal is in view of a repeater).

Consider claim 51. The system according to claim 48, wherein the information relating to the proximity of the mobile station relative to the location node comprises a round-trip- delay (RTD) measurement (abstract, title, ¶: 18,146, Stein teaches using round trip delay (RID) measurements to locate a terminal when the terminal is in view of a repeater).

Consider claim 14. The method according to claim 1, wherein the position estimate information (PEI) parameters include the channel identification at which the mobile station and the location node communicate (abstract, title, ¶: 138, Stein teaches the controller 730 receives the measurements for the base stations and/or GPS satellites, the PN sequences for the base stations, the identifier PN's of the repeaters, the estimated signal quality of the received signals, or any combination thereof).

Consider claim 16. The method according to claim 1, wherein the position estimate information (PEI) parameters include information which identifies a transmitter type of the location node (abstract, title, ¶: 138, Stein teaches the controller 730 receives the measurements for the base stations and/or GPS satellites, the PN sequences for the base stations, the identifier PN's of the repeaters, the estimated signal quality of the received signals, or any combination thereof).

Consider claim 17. The method according to claim 1, wherein the position determination entity comprises a position determination entity (PDE) operating in a code division multiple access (CDMA) network (abstract, title, ¶: 6, 9, Stein teaches system 100 may be designed to conform to systems such as WCDMA, CDMA 2000, or IS-95 and this system comprises a PDE 130 that receives time measurements and/or

identification codes from the terminals and provides control and other information related to position determination).

Consider claim 29, Stein discloses everything as applied in claim 27; further comprising: sending the position estimate to the mobile station. The Examiner maintains this feature was well known in the art at the time of invention as taught by stein (fig. 1a, 7; ¶: 3, 135,138, 146; Stein teaches GPS information about position information given/received to mobile device, hence, including latitude and longitude as GPS information include among other things latitudes and longitudes and is analogous and notoriously well known in the art).

Consider claim 39. The method according to claim 27, wherein the position determination entity comprises a position determination entity (PDE) operating in a code division multiple access (CDMA) network (abstract, title, ¶: 6, 9, Stein teaches system 100 may be designed to conform to systems such as WCDMA, CDMA 2000, or IS-95 and this system comprises a PDE 130 that receives time measurements and/or identification codes from the terminals and provides control and other information related to position determination).

Consider claim 52. The system according to claim 42, wherein the position determination entity comprises a position determination entity (PDE) operating in a code division multiple access (CDMA) network (abstract, title, ¶: 6, 9, Stein teaches system 100 may be designed to conform to systems such as WCDMA, CDMA 2000, or IS-95 and this system comprises a PDE 130 that receives time measurements and/or

identification codes from the terminals and provides control and other information related to position determination).

Consider claim 19. The method according to claim 1, wherein the location node comprises a base station (abstract, title, ¶: 135, Stein teaches a terminal 106x, reading on claimed “mobile station”, receives signals from GPS satellites base stations, and/or repeaters).

Consider claim 59. The system according to claim 42, wherein the location node comprises a base station (abstract, title, ¶: 135, Stein teaches a terminal 106x, reading on claimed “mobile station”, receives signals from GPS satellites base stations, and/or repeaters).

Consider claim 20. The method according to claim 1, wherein the location node comprises a wireless access point (abstract, title, ¶: 135, Stein teaches a terminal 106x, reading on claimed “mobile station”, receives signals from GPS satellites base stations, and/or repeaters).

Consider claim 60. The system according to claim 42, wherein the location node comprises a wireless access point (abstract, title, ¶: 135, Stein teaches a terminal 106x, reading on claimed “mobile station”, receives signals from GPS satellites base stations, and/or repeaters).

Consider claim 61. The system according to claim 42, wherein the location node comprises a GPS satellite (abstract, title, ¶: 135, Stein teaches a terminal 106x, reading on claimed “mobile station”, receives signals from GPS satellites base stations, and/or repeaters).

Consider claim 22. The method according to claim 1, the method further comprising: collecting in the mobile station, position estimate information (PEI) transmitted by a plurality of location nodes; and generating in the mobile station, the PEI parameters based upon the PEI collected from the plurality of location nodes, wherein the PEI parameters include -formation which identifies a location of at least one of the plurality of location nodes (abstract, title, ¶: 135, 138, Stein teaches the RF receiver unit 722 conditions and digitizes the received signal to provide samples to the controller 730 which receives the measurements for the base stations and/or GPS satellites, the PN sequences for the base stations, the identifier PN's of the repeaters, the estimated signal quality of the received signals, or any combination thereof).

Consider claim 41. The method according to claim 27, wherein the position estimate information (PEI) parameters include information which identifies a location of at least one of a plurality of location nodes with which the mobile station is in communication (abstract, title, ¶: 135, 138, Stein teaches the RF receiver unit 722 conditions and digitizes the received signal to provide samples to the controller 730 which receives the measurements for the base stations and/or GPS satellites, the PN sequences for the base stations, the identifier PN's of the repeaters, the estimated signal quality of the received signals, or any combination thereof).

Consider claim 54. The system according to claim 42, further comprising:

a plurality of location nodes, each transmitting position estimate information (PEI) to the mobile station; and wherein the mobile station generates the PEI parameters based upon the PEI collected from each of the plurality of location nodes, and wherein the PEI

parameters include information which identifies a location of at least one of the plurality of location nodes (abstract, title, ¶: 135, 138, Stein teaches the RF receiver unit 722 conditions and digitizes the received signal to provide samples to the controller 730 which receives the measurements for the base stations and/or GPS satellites, the PN sequences for the base stations, the identifier PN's of the repeaters, the estimated signal quality of the received signals, or any combination thereof).

Consider claim 23. The method according to claim 22, wherein each of the plurality of location nodes comprise a different type of transmission entity (abstract, title, ¶: 135, Stein teaches a terminal 106x, reading on claimed “mobile station”, receives signals from GPS satellites base stations, and/or repeaters).

Consider claim 55. The system according to claim 42, wherein each of the plurality of location nodes comprise a different type of transmission entity (abstract, title, ¶: 135, Stein teaches a terminal 106x, reading on claimed “mobile station”, receives signals from GPS satellites base stations, and/or repeaters).

Consider claim 24. The method according to claim 1, wherein the position estimate information (PEI) comprises a system parameters message (SPM) (abstract, title, ¶: 47, Stein teaches a PN sequence, reading on claimed “SPM”, is used to generate the pilot references and to spread data at the base stations and it is continually repeated to generate a continuous spreading sequence that is then used to spread pilot and traffic data).

Consider claim 56. The system according to claim 42, wherein the position estimate information (PEI) comprises a system parameters message (SPM) (abstract, title, ¶: 47,

Stein teaches a PN sequence, reading on claimed “SPM”, is used to generate the pilot references and to spread data at the base stations and it is continually repeated to generate a continuous spreading sequence that is then used to spread pilot and traffic data).

Consider claim 25. The method according to claim 1, wherein the position estimate information (PEI) comprises a standard code division multiple access (CDMA) system parameters message (SPM) (abstract, title, ¶: 47, Stein teaches a PN sequence, reading on claimed “SPM”, is used to generate the pilot references and to spread data at the base stations and it is continually repeated to generate a continuous spreading sequence that is then used to spread pilot and traffic data).

Consider claim 57. The system according to claim 42, wherein the position estimate information (PEI) comprises a standard code division multiple access (CDMA) system parameters message (SPM) (abstract, title, ¶: 47, Stein teaches a PN sequence, reading on claimed “SPM”, is used to generate the pilot references and to spread data at the base stations and it is continually repeated to generate a continuous spreading sequence that is then used to spread pilot and traffic data).

Consider claim 26. The method according to claim 1, wherein the position estimate information (PEI) is a broadcast message from the location node (abstract, title, ¶: 21, Stein teaches the identification code uniquely associated with each repeater is sent by each repeater within a particular coverage area and the identification cedes comprise PN sequences at defined offsets).

Consider claim 58. The system according to claim 42, wherein the position estimate information (PEI) is a broadcast message from the location node (abstract, title, ¶: 21, Stein teaches the identification code uniquely associated with each repeater is sent by each repeater within a particular coverage area and the identification cedes comprise PN sequences at defined offsets)

Consider claim 32. The method according to claim 27, wherein the position estimate information (PEI) parameters include a pseudo-random noise (PN) code index of the location node (abstract, title, ¶: 143, Stein teaches a RX data processor 822 to recover the data transmitted by the terminal which may include any combination of measurements, identifier PN's reported by the terminal).

Consider claims 7, 33, and 46, Stein discloses everything as applied in claims 1, 27, and 42 above and he further discloses one or more repeaters 114 may be employed by system 100 to provide coverage for regions that would not otherwise be covered by a base station (¶: 7). Stein also discloses a terminal 106x receives signals from GPS satellites, base stations, and/or repeaters (¶: 135). Stein also discloses the controller 730 receives the measurements for the base stations and/or GPS satellites, the PN sequences for the base stations, the identifier PN's of the repeaters, the estimated signal quality of the received signals, or any combination thereof (¶: 138), reading on claimed, "wherein if the mobile station is not currently in view of the location node." It is inherent that if the mobile station has received the PN sequence from repeater 114 that it is not in view of the base station. the PEI parameters include information relating to elapsed time which, the mobile station has been out of view of the location node. The

Examiner maintains this feature was well known in the art at the time of invention (fig. 1a, 7; ¶: 3, 135,138, 146; Stein teaches GPS information about position information given/received to mobile device, hence, including latitude and longitude and time stamps as GPS information include among other things latitudes and longitudes and time stamps and this is analogous and notoriously well known in the art).

Consider claims 8, 34, and 47, Stein discloses everything as applied in claims 1, 27, and 42 above and he further discloses one or more repeaters 114 may be employed by system 100 to provide coverage for regions that would not otherwise be covered by a base station (¶: 7). Stein also discloses a terminal 106x receives signals from GPS satellites, base stations, and/or repeaters (¶: 135). Stein also discloses the controller 730 receives the measurements for the base stations end/or GPS satellites, the PN sequences for the base stations, the identifier PN's of the repeaters, the estimated signal quality of the received signals, or any combination thereof (¶: 138), reading on claimed "wherein if the mobile station is not currently in view of the location node." It is inherent that if the mobile station has received the PN sequence from repeater 114 that it is not in view of the base station. The PEI parameters include velocity estimation of the mobile station. The Examiner maintains this feature was well known in the art at the time of invention (fig. 1a, 7; ¶: 3, 135,138, 146; Stein teaches GPS information about position information given/received to mobile device, hence, including latitude and longitude and velocity as GPS information include among other things latitudes and longitudes and velocity and this is analogous and notoriously well known in the art).

Consider claims 11, 37, and 50, Stein discloses everything as applied in claims 1, 27, and 42 above; the information relating to the proximity of the mobile station relative to the location node comprises a signal-to-interference ratio of the location node. The Examiner maintains this feature was well known in the art at the time of invention (fig. 6A; ¶: 116-125, 135,138, 146; Stein teaches time difference of arrival, TDOA, information about position information given/received to mobile device, hence, including Time difference of arrival, TDOA, information include among other things this is analogous and notoriously well known in the art).

Consider claim 13, Stein discloses everything as applied in claim 1; the PEI parameters include a direction of motion of the mobile station. The PEI parameters include velocity estimation of the mobile station. The Examiner maintains this feature was well known in the art at the time of invention (fig. 1a, 7; ¶: 3, 135,138, 146; Stein teaches GPS information about position information given/received to mobile device, hence, including latitude and longitude and velocity as GPS information include among other things latitudes and longitudes and velocity and this is analogous and notoriously well known in the art).

Consider claim 15, Stein discloses everything as applied in claim 1; the PEI parameters include information that identifies a device type of the mobile station. The Examiner maintains this was well known in the art at the time of invention (¶: 73-74, Stein teaches identifying devices types such as repeaters).

Consider claims 18, 40, and 53, Stein discloses everything as applied in claims 1, 27, and 42; the position determination entity comprises a service mobile location center

(SMLC) operating in a global system for the mobile communication (GSM) network. The Examiner maintains this feature was well known in the art at the time of invention (fig. 1a, Stein teaches the SMLC as shown as been part of the BSC as element 130, PDE).

Examiner's note: Examiner has cited particular columns and line numbers and/or paragraphs in the references as applied to the claims above for the convenience of the applicant. Although the specified citations are representative of the teachings of the art and are applied to the specific limitations within the individual claim, other passages and figures may apply as well. It is respectfully requested from the applicant in preparing responses to fully consider the reference in entirety as potentially teachings all or part of the claimed invention, as well as the context of the passage as taught by the prior art or disclosed by the Examiner.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to DIEGO HERRERA whose telephone number is (571)272-0907. The examiner can normally be reached on Monday-Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner’s supervisor, Lester Kincaid can be reached on (571) 272-7922. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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